

United States Government

Department of Energy  
Bonneville Power Administration

# memorandum

DATE: January 22, 2002

REPLY TO  
ATTN OF: KEP/Z992

SUBJECT: Supplement Analysis for the Transmission System Vegetation Management Program FEIS  
(DOE/EIS-0285/SA-36)

TO: James Jellison – TFO/Olympia  
Elizabeth Johnson – TFO/The Dalles

**Proposed Action:** Vegetation Management along the Ostrander-Troutdale Transmission Line ROW. The line is 500 kV Transmission Line. Project includes work under sections of adjacent Hanford-Ostrander 500 kV line; Big Eddy-Ostrander 500 kV line; Big Eddy-Chemawa 230 kV line; and Big Eddy-McLoughlin 230 kV line. The proposed work will be accomplished in the sections of the transmission line corridors as indicated in Section 1 the attached checklist.

**Location:** The ROW is located in Clackamas County, OR, in BPA's Olympia Region.

**Proposed by:** Bonneville Power Administration (BPA).

**Description of the Proposed Action:** BPA proposes to clear unwanted vegetation in the rights-of-ways and around tower structures that may impede the operation and maintenance of the identified transmission lines. All work will be in accordance with the National Electrical Safety Code and BPA standards. BPA plans to conduct vegetation control with the goal of removing tall growing vegetation that is currently or will soon be a hazard to the transmission line. BPA's overall goal is to have low-growing plant communities along the rights-of-way to control the development of potentially threatening vegetation.

**Analysis:** This project meets the standards and guidelines for the Transmission System Vegetation Management Program Final Environmental Impact Statement (FEIS) and Record of Decision (ROD).

## Planning Steps

### *1. Identify facility and the vegetation management need.*

The work involved will be to clear tall growing vegetation that is currently or will soon pose a hazard to the lines; treat the associated stumps and re-sprouts with herbicides to ensure that the roots are killed preventing new sprouts and selectively eliminating tall growing vegetation *before* it reaches a height or density to begin competing with low-growing vegetation. All work will take place in existing rights-of-ways. All work will be accomplished by selective vegetation control methods to assure that there is little potential harm to non-target vegetation and to low-growing plants. Desirable low-growing plants will not be disturbed. The work will provide system reliability.

Access roads will be treated using mowing and herbicide applications. Noxious weeds will also be treated at this time.

The overall vegetation management scheme will initially include selective removal and treatment of tall growing species utilizing cut and stump treat methods using practically non toxic to slightly toxic herbicides as outlined in the attached checklist.

Subsequent work will be needed as follow-up to treat misses and any other re-growth from 3-4 years after initial treatment.

Future cycles - As tall growing species are controlled, 3-4 year entry treatments will be needed. Also a review of Danger trees and other hazards will take place at that time.

## *2. Identify surrounding land use and landowners/managers.*

The subject corridor traverses pasture lands; Christmas tree farms; commercial nurseries and some residential areas. In addition, the State of Oregon, Clackamas County and the City of Portland Water Bureau own property within the ROW along the Sandy River and Bull Run River, respectively. Prior to commencing work the Natural Resource Specialist for the project will notify all property owners by letter and will follow up by resolving any issues or concerns that may arise. The NRS will also coordinate with State, County and City agencies prior to starting work.

## *3. Identify natural resources.*

Riparian areas, wetlands, and T&E creeks and rivers (Clackamas River, Goose Creek, Deep Creek, Tickle Creek, the Sandy River and Bull Run River) have been identified in the areas of the proposed work. In addition, the project will cross some steep slopes and several spanned canyons.

No other T&E/wildlife issues, visually sensitive areas, cultural resources or other natural resource issues have been identified along the other work corridor.

## *4. Determine vegetation control and debris disposal methods.*

A licensed contractor would undertake the proposed work. The unwanted vegetation would be removed by employing cut stump, basal and foliar treatment methods. Chemical means would be employed to prevent resprouts from the cut stumps. Herbicides used would be applied by licensed applicators following manufacturers' label instructions and BPA's management prescriptions. The herbicides used for vegetation management will be consistent with what is specified in the Vegetation Management FEIS.

The contractor will receive a list of required mitigation measures (management prescriptions) to follow as well as a set of maps delineating the transmission line and potential sensitive resource areas. The contractor will follow manufacturers' label instructions when applying herbicides.

Debris will be disposed by:

Lop and Scatter - (Branches of a fallen tree are cut off (lopped) by ax or chainsaw, so the tree trunk lies flat on the ground. The trunks are occasionally cut in 1-to-2-m (4-to-8-ft.) lengths. The cut branches and trunks are then scattered on the ground, laid flat, and left to decompose.) Mow, mulch and slash techniques will be used where heavy concentrations of debris occur.

5. *Determine revegetation methods, if necessary.*

No re-vegetation will be conducted at this time.

6. *Determine monitoring needs.*

An inspector will monitor the work being performed at the time of the initial work. Follow-up inspections will be performed during routine regular patrols. Additional required work would be identified at that time.

7. *Prepare appropriate environmental documentation.*

This Supplement Analysis finds that 1) the proposed actions are substantially consistent with the Transmission System Vegetation Management Program FEIS (DOE/EIS-0285) and ROD, and; 2) there are no new circumstances or information relevant to environmental concerns and bearing on the proposed actions or their impacts. Therefore, no further NEPA documentation is required.

*/s/ Elaine Stratton* \_\_\_\_\_  
 Elaine Stratton  
 Environmental Protection Specialist

CONCUR: \_\_\_\_\_  
 Thomas C. McKinney  
 NEPA Compliance Officer

DATE: \_\_\_\_\_

Attachments

**ADDENDUM TO THE  
STATEMENT OF WORK**

**Ostrander-Troutdale/Hanford-Ostrander  
Big Eddy-Ostrander/Chemewa/McLoughlin Corridors**

Description of work:

Hand cut /Stump, Lop and Scatter Treatment	222.9 acres
Hand cut & /or Mowing/Stump Treatment	215.3 acres
Structure clearing	All Structures
Noxious weed treatment	30 acres
Access Roads – Mowing & Treatment	30 acres
Slash Disposal (Chipping)	100 hours

**GENERAL**

1. The following right-of-ways consist of many age classes of trees and brush that grow tall, including but not limited to conifers, Rocky Mountain maple, willow, cascara, alder species, chokecherry, big leaf maple, and alder species. Through the use of hand cutting, machine cutting or by a combination thereof, the Contractor shall control the vegetation on the transmission line right-of-way and access roads, as specified in the Treatment Detail Sheet. The Contractor will make an effort to leave the low growing vegetation on the right-of-way.
2. The contractor shall cut, mow, or a combination thereof, Cascara, vine maple, wild filbert, willow, and bitter/choke cherry, when the ground to conductor clearance is less than 50 feet. When the clearance is higher than 50 feet these species shall be left untreated unless they are in a road or tower treatment zone.
3. Access roads both on and off of the Right-of-way require control. Approximately 30 acres of treatment is required. Most access road work is within the row.
4. This project will include a variety of treatments to control the target vegetation. The Contractor will enter the right-of-way more than once during the contract period to meet the control level required. The contract period will begin in March 2002 and terminate Sept 30, 2002.
5. The Contractor shall furnish a minimum of one mowing machine equipped according to the following specifications:

A rubber tire machine capable of using at least a 6 foot rotating mowing deck that has an enclosed housing cutting mechanism to aid in mulching brush, slash, and other residues. The mower shall be equipped with a minimum 100 horsepower PTO.

OR

A track machine equipped with a minimum of a 50-gal/min. hydraulic pump and a 4-foot mowing head mounted on the end of the boom. The boom attached mower shall reach at least 30 feet each side and the boom shall be equipped with a positive type locking device to restrict the elevation of the boom to a maximum height of 15 feet.

Equipment shall meet OSHA requirements for heavy equipment operations in forest environments. Contractor must have required equipment/machinery in his/her possession and provide a description of the equipment at time of bid.

6. The Contractor will control all trees and brush that will grow tall (target vegetation) which are greater than 1 foot tall in the right-of-way as designated by the details of this contract. Trees and brush in this height class that are visible will be controlled. Target vegetation that is hidden by desirable species will not be counted in the final evaluation by BPA.

**The Contractor will cut the entire width of the right-of-way. To identify width of the corridor, the contractor will locate the centerline of the outside line(s) and use a tape measure to locate and flag the both edges of the right of way before work begins.**

7. All hardwood species that grow tall will be treated with an approved herbicide to prevent re-sprouting **unless there is a sensitive issue that prevents the use of herbicides.** Herbicides are listed in the treatment zones and detail sheets. Only those herbicides, mixtures & adjuvants approved by BPA may be used. (See BPA's list of approved herbicides, mixtures, and adjuvants.) The preferred treatment will be cut stump treatments using a 25% mix of Garlon 4 with approved oil. Some of the areas are suitable for basal treatment and should be mixed and applied according to the label. All conifers will be manually cut according to the standard.

8. If basal application is practical and the target vegetation is less than 14 feet, located under the conductor of each line plus 15 feet to the outside of the lines, or has more than 40 feet of conductor clearance, the vegetation can be left standing if controlled with herbicide methods. Vegetation located on other parts of the right-of-way that is less than 30 feet tall or has more than 40 feet of conductor clearance can also be left standing if controlled with herbicide methods. All trees that do not meet this criterion must be cut to standard.

9. When the ground to conductor clearance exceeds 125 feet (STC), control only vegetation that is within 50 feet of line clearance (top of brush to line).

10. After completion of the work the contractor will be paid up to 90% of the price of the contract. The remainder will be paid based on the 2002 summer evaluations.

11. Pacific yew (*Taxus brevifolia*) may be cut. But at least one entire whorl of live branches must be left attached to the stump.

12. Cutting, removal, or damaging threatened, endangered, or sensitive plants are not permitted.

13. Permitted activities shall be immediately halted should an undocumented cultural resource site or threatened, endangered, or sensitive plant/wildlife species is discovered.

14. All woody vegetation within 30 feet of the center of a tower or wood pole that would inhibit safe access or maintenance work on a tower will be controlled. This includes vegetation such as blackberries, briars, poison oak, poison ivy, and other species that by size or density may hinder routine inspection and maintenance work or make it more hazardous. Stumps will not exceed 4 inches in height and all debris and slash will be pulled out of the control area.

15. Access roads shall have all vegetation except grasses controlled so that stumps do not exceed 2 inches height in the roadbed and 4 inches in height off of the roadbed. The control area is 14 feet wide (7 foot

centers) and fifteen feet high. Limbs will be trimmed back flush to the trunk as possible when trees are rooted outside of the control area. All debris will be pulled back 10 feet from the access road as prescribed.

17. SKIP AREAS: These areas generally have little or no indication of tall growing trees. However, the Contractor is still instructed to review these areas for occasional tall growing tree or trees present.

18. NOXIOUS WEED CONTROL: Scotch Broom and other noxious weeds may be present on areas of the right-of-way. The contractor and inspector will identify areas needed control and provide treatment of up to 30 acres of noxious weed control using appropriate methods.

19. As stated in the contract, the crew supervisor will be fluent in the English language. Crew foreman or supervisors must be able to fluently speak, read, write, and comprehend the English language.

20. If landowners have houses or facilities within 200 feet of the Right-of-way, the contractor will contact them in person or leave a door hanger at the house one-day prior to treatment.

\*\*\*\*\*

## EVALUATION

1. The contractor is expected to achieve the following level of control of target species.

<u>Tree height class</u>	<u>% control</u>
0-5 feet tall	90%
5-10 feet tall	95%
10 feet tall +	100%

In addition visual and performance inspection will be made. Criteria will include the Contractors ability to perform according to the specifications, ability to safely perform the work, and a visual inspection of the control work.

# Vegetation Management Checklist

## 1. IDENTIFY FACILITY AND THE VEGETATION MANAGEMENT NEED

### 1.1 Describe Right-of-way.

Corridor Name	Corridor Length & kV	Easement width	Miles of Treatment
Ostr-Troutdale	20 miles/500 kV	Variable	12
Hanford-Ostr	182 miles/500 kV	Variable	12
BE-Ostr	72 miles/500 kV	Variable	12
BE-Chemawa	100 miles/230 kV	Variable	12
BE-McLoughlin	100 miles/230 kV	Variable	12

See Handbook — [List of Right-of-way Components](#) for checkboxes and the requirements for the components [Rights-of-way](#), [Access Roads](#), [Switch Platforms](#), [Danger Trees](#), and [Microwave Beam paths](#).

Right-of-Way – clearing in right-of-way

Transmission Structures – clearing around

Access Road clearing - approximate miles – 3

Reclaim (“C”) Trees

### 1.2 Describe the vegetation needing management.

See handbook — [List of Vegetation Types](#), [Density](#), [Noxious Weeds](#) for checkboxes and requirements.

Douglas Fir /True Fir /Hemlock /Pine /Alder /Maple /Oak /Willows /Birch /Popular /Cedar /Cottonwood

Wild Cherry /Residential/orchard tree-trimming

/Noxious Weeds -

Blackberries /Poison Oak /Scotch Broom /Tansey

### 1.3 List measures you will take to help promote low-growing plant communities. If promoting low-growing plants is not appropriate for this project, explain why.

See Handbook — [Promoting Low-Growing Plant Communities](#) for requirements and checkboxes.

Tall-growing vegetation that is currently or will soon be a hazard to the line will be removed. (In places where tall growing vegetation must be left in place, it may not be possible to promote low-growing plants.)

Cut-stump or follow-up herbicide treatments on resprouting-type species will be carried out to ensure that the roots are killed.

Vegetation that will grow tall will be selectively eliminated *before* it reaches a height or density to begin competing with low-growing species.

Desirable low-growing plants will not be disturbed. Only selective vegetation control methods that have little potential to harm non-target vegetation will be used.

### 1.4 Describe overall management scheme/schedule.

See Handbook - [Overall Management Scheme/Schedule](#).

**Initial entry** – All tall growing tree & brush species need to be cut and treated to prevent grow-into trees. Access roads & structures will be mowed and treated where practicable. Noxious weed will be treated. Contractor will begin work in spring of 2002 and return in the summer of 2002 for followup treatments.

**Subsequent entries** – Every 3-4 years, a maintenance contract will be necessary to pick up resprouts, noxious weeds, and invading tall growing species. Use of herbicides on the initial and subsequent entries should reduce quantity and cost of work.

**Future cycles** – Same as above.

## 2. IDENTIFY SURROUNDING LAND USE AND LANDOWNERS/MANAGERS

### 2.1 List the types of landowners and land uses along your corridor.

See Handbook — [Landowners/Managers/Uses](#) for requirements, and [List of Landowners/Managers/Uses](#) for a checkbox list.

Land along row mainly consists of pasture lands, Christmas tree farms, commercial nurseries and some single family subdivision lots. State of Oregon, Clackamas county and City of Portland Water Bureau own property within the r/w along the Sandy River & Bull Run River respectively.

### Describe method for notifying right-of-way landowners and requesting information (i.e., doorhanger, letter, phone call, e-mail, and/or meeting). Develop landowner mail list, if appropriate.

See Handbook — [Methods for Notification and Requesting Information](#) for requirements.

Method of notification will be a letter sent to landowners at least 2 weeks prior to commencing work. NRS will work with landowners to resolve issues prior to contractor's work.

### 2.3 List the specific land owner/landuse measures — determined from the handbook or through your consultations with the entities — that will be applied.

See handbook — [Requirements and Guidance for Various Landowners/Uses](#) for requirements and guidance, also [Residential/Commercial](#), [Agricultural](#), [Tribal Reservations](#), [FS-managed lands](#), [BLM –managed lands](#), [Other federal lands](#), [State/ Local Lands](#).

Below, is the current conditions of the row. Not all Christmas tree farms have permits according to LIS information. Once work commences on row, more permits may be requested and issued.

*Info for Ostr-Tr/BE lines/Hanf-Ostr Corridor until splits in the row occur*

Span		Landowner/use	Specific measures to be applied
From	To		
4/1	2/4	Christmas tree farms – various owners. Some w/o permits.	Row boundaries will be flagged & scattered vegetation may be cut & treated in scattered locations.
71/2	71/1-60	BE-Ch/McL only. Christmas tree farm.	Row boundaries will be flagged & scattered vegetation may be cut & treated in scattered locations.
3/2+700	3/3-100	Tree & Brush permit.	Row boundaries will be flagged & scattered vegetation may be cut & treated in scattered locations.
5/1+200	5/2+200	Sandy Farms – permitted.	Row boundaries will be flagged & scattered vegetation may be cut & treated in scattered locations.
<b><i>Ostr-Trout/BE-O/Ch/McL split @ 5/2/1 &amp; 68/4, respectively.</i></b>			
<b>Ostr/Tr</b> 6/3+900	7/1+500	Tree & Brush permit.	Row boundaries will be flagged & scattered vegetation may be cut & treated in scattered locations.
7/1+1150	7/3+100	Commercial Nursery & Tree and Brush Agreement	Row boundaries will be flagged & scattered vegetation may be cut & treated in scattered locations.
7/4	7/4+350	Tree & Brush permit.	Row boundaries will be flagged & scattered vegetation may be cut & treated in scattered locations.
8/2+800	8/5+450	Nursery.	Row boundaries will be flagged & scattered vegetation may be cut & treated in scattered locations.

Span		Landowner/use	Specific measures to be applied
From	To		
11/4+400	12/1+150	Tree & Brush permit.	Row boundaries will be flagged & scattered vegetation may be cut & treated in scattered locations.
<b>BE-Ostr</b> 62/3	62/3+900	Tree & Brush permit.	Row boundaries will be flagged & scattered vegetation may be cut & treated in scattered locations.
63/1+485	63/3+864	Nursery.	Row boundaries will be flagged & scattered vegetation may be cut & treated in scattered locations.
63/4+625	63/4+960	Tree & Brush permit.	Row boundaries will be flagged & scattered vegetation may be cut & treated in scattered locations.
64/1+380	64/1+600	Tree & Brush permit.	Row boundaries will be flagged & scattered vegetation may be cut & treated in scattered locations.
64/2+150	64/3+1250	Tree & Brush permit.	Row boundaries will be flagged & scattered vegetation may be cut & treated in scattered locations.
64/4+225	64/4+380	Tree & Brush permit.	Row boundaries will be flagged & scattered vegetation may be cut & treated in scattered locations.
64/4+865	65/1+200	Tree & Brush permit.	Row boundaries will be flagged & scattered vegetation may be cut & treated in scattered locations.
65/1+700	65/2+170	Tree & Brush permit.	Row boundaries will be flagged & scattered vegetation may be cut & treated in scattered locations.
66/1	68/4+1053	Sandy Farms-Nursery	Row boundaries will be flagged & scattered vegetation may be cut & treated in scattered locations.

**2.4 Review any existing landowner agreements (e.g. tree/brush Permits or Agreements). List in table above any provisions that need to be followed and where they are located.**

See handbook — [Landowner Agreements](#) for requirements.

Some Christmas tree and commercial nursery are utilizing r/w without permits. Landowners need to be notified of BPA policy and secure permits. Several others have been cancelled according to the LIS for reasons unstated. Other uses applied and granted are for drainfields, water lines, driveways, etc.

**2.5 List any known casual informal use of the right-of-way by non-owner publics. List any constraints or measure's to take due to the informal use.**

See handbook — [Casual Informal Use of Right-of-way](#) for requirements.

N/A

**2.6 List other potentially affected people, agencies, or tribes (that are not landowners/managers) that need to be notified or coordinated with. Describe method of notification and coordination.**

See handbook — [Other Potentially Affected Publics](#) for requirements and suggestions.

Work activities along Sandy River should be coordinated with OR State Fish & Wildlife Dept. Explanation should be given of how the trees within the corridor will be cut, treated and what measures will be taken to dispose of the slash. Clackamas County is underlying fee owner on the east side of Sandy River. Rathman, private landowner, owns the property on the Westside of River.

Work along the Bull Run River should be discussed with City of Portland Water Bureau personnel.

### 3. IDENTIFY NATURAL RESOURCES

See Handbook — [Natural Resources](#)

**3.1 List any water resources (streams, rivers, lakes, wetlands) that may be impacted by vegetation control activities. For each water body describe the control methods and requirements or mitigation measures that will be used.**

See Handbook — [Water Resources](#) for requirements for working near water resources including buffer zones.

Span		Waterbody	T&E?	Method	Herbicide	Application Technique	Buffer	Other
From	To							
1/4+800	1/4+1100	Clackamas R.	Yes	Handcut & selective	Rodeo	Spot spray stumps up to 100' of waters edge.	200'	Debris to be fell away from river. No herb w/in 100' of waters edge.
2/4+100	2/4+400	Goose Cr.	Yes	Handcut & selective	Rodeo	Spot spray stumps up to 100' of waters edge.	200'	Debris to be fell away from river. No herb w/in 100' of waters edge.
3/2+330	3/2+430	Creek	No	Handcut & selective	Rodeo	Spot spray stumps	100'	Debris to be fell away from cr.
3/5+700	3/5+1800	Deep Cr.	Yes	Handcut & selective	Rodeo	Spot spray stumps up to 100' of waters edge.	200'	Debris to be fell away from river. No herb w/in 100' of waters edge.
4/1+500	4/1+600	Creek	No	Handcut & selective	Rodeo	Spot spray stumps	100'	Debris to be fell away from cr.
4/2+400	4/2+600	Wetlands	No	Handcut & selective	Rodeo	Spot spray stumps	100'	Debris to be fell away from cr.
5/5+400	5/5+600	Creek	No	Handcut & selective	Rodeo	Spot spray stumps	100'	Debris to be fell away from cr. & wetland.
6/2+500	6/2+900	Wetlands	No	Handcut & selective	Rodeo	Spot spray stumps	100'	Debris to be fell away from cr.
6/3+100	6/3+550	Creek	No	Handcut & selective	Rodeo	Spot spray stumps	100'	Debris to be fell away from cr.
7/1+500	7/1+1150	Tickle Creek	Yes	Handcut & selective	Rodeo	Spot spray stumps up to 100' of waters edge.	200'	Debris to be fell away from river. No herb w/in 100' of waters edge.
9/5	9/5+1415	Wetlands	No	Handcut & selective	Rodeo	Spot spray stumps	100'	Debris to be fell away from cr.
10/3+500	10/3+1000	Sandy River	Yes	Handcut & selective	Rodeo	Spot spray stumps up to 100' of waters edge.	200'	Debris to be fell away from river. No herb w/in 100' of waters edge.
10/3+1400	10/3+1800	Wetlands	No	Handcut & selective	Rodeo	Spot spray stumps	100'	Debris to be fell away from cr.
11/1+300	11/1+400	Creek	No	Handcut & selective	Rodeo	Spot spray stumps	100'	Debris to be fell away from cr.
11/2+700	11/2+1200	Bull Run R.	Yes	Handcut & selective	Rodeo	Spot spray stumps up to 100' of waters edge.	200'	Debris to be fell away from river. No herb w/in 100' of waters edge.

Span		Waterbody	T&E?	Method	Herbicide	Application Technique	Buffer	Other
From	To							
BE-O/CH/McL								
62/1+800	62/1+1800	Creeks	No	Handcut & selective	Rodeo	Spot spray stumps	100'	Debris to be fell away from cr.
62/2+200	62/2+300	Creek	No	Handcut & selective	Rodeo	Spot spray stumps	100'	Debris to be fell away from cr.
62/3+960	62/3+1050	Creek	No	Handcut & selective	Rodeo	Spot spray stumps	100'	Debris to be fell away from cr.
63/4+960	63/4+1060	Creek	No	Handcut & selective	Rodeo	Spot spray stumps	100'	Debris to be fell away from cr.
63/5	63/5+1125	Creek	No	Handcut & selective	Rodeo	Spot spray stumps	100'	Debris to be fell away from cr.
64/1+600	64/1+1500	Creek	No	Handcut & selective	Rodeo	Spot spray stumps	100'	Debris to be fell away from cr.
65/2+170	65/2+1688	Creek	No	Handcut & selective	Rodeo	Spot spray stumps	100'	Debris to be fell away from cr.

**3.2 If planning to use herbicides, list locations of any known irrigation source, wells, or springs (landowners maybe able to provide this info if requested).**

See Handbook — [Herbicide Use Near Irrigation, Wells or Springs](#) for buffers and herbicide restrictions.

2/1+100 to 2/1+200 – Spring house identified. No herbicides allowed within 50' of the spring. Only herbicides that do not have ground or surface water advisories between 165-500 feet of well head may be used.

**3.3 List below the areas that have Threatened or Endangered Plant or Animal Species and the name of the species, and any special measures that need to be taken due to their presence. Attach any BAs, T&E maps, or letters from US Fish and Wildlife.**

See Handbook — [T&E Plant or Animal Species](#) for requirements and determining presence.

See list above for T&E streams & mitigation. No other T&E plants or animals have been identified.

**3.4 List any other measures to be taken for enhancing wildlife habitat or protecting species.**

See Handbook — [Protecting Other Species](#) for requirements.

No other plants or animals have been identified.

**3.5 List any visually sensitive areas and the measures to be taken at these areas.**

See Handbook — [Visual Sensitive Areas](#) for requirements.

Selective cutting & local/spot spraying will help to screen visual effects of operation. Low growing vegetation will be left wherever possible along roadsides & row.

**3.6 List areas with cultural resources and the measures to be taken in those areas.**

See Handbook – [Cultural Resources](#) for requirements.

None identified – minor soil disturbance expected.

**3.7 List areas with steep slopes or potential erosion areas and the measure and methods to be applied in those areas.**

See Handbook – [Steep/Unstable Slopes](#) for requirements.

Most of the r/w is gentle rolling hills or level ground. Steep side slopes require only trees within 50' of the conductors need to be hand cut. Hardwood stumps will be treated with herbicides

appropriate to zone prescription. Low growing vegetation will be maintained to avoid erosion. COTR/inspector/contractor shall shut down any operations immediately that may disturb soil or create possible erosion problems. Contract will be scheduled to run for a full year to avoid working in saturated conditions.

### 3.8 List areas of spanned canyons and the type of cutting needed.

See Handbook – [Spanned Canyons](#) for requirements.

Span		Methods, cutting
From	To	
1/4	1/4+800	Approx. 125' vertical distance between ground (Clackamas R) and line. Identify & handcut all trees that are w/in 50' of line & fell away from river. Spot spray hardwood stumps w/ herbicide according to zone. Maintain all other low growing vegetation.
3/5	4/1	Deep Cr. Approx. >125' vertical distance between ground (streams) and line. Identify & handcut all trees w/in 50' of line & fell away from stream/wetland. Spot spray hardwood stumps w/ Rodeo. Maintain all other low growing vegetation.
5/5	6/1	Approx. >125' vertical distance between ground (streams) and line. Identify & handcut all trees w/in 50' of line & fell away from stream/wetland. Spot spray hardwood stumps w/ Rodeo. Maintain all other low growing vegetation.
6/2	6/3	Approx. 125' vertical distance between ground (wetlands & creek) and line. Identify & handcut all trees that are w/in 50' of line & fell away from stream. Spot spray hardwood stumps w/ Rodeo. Maintain all other low growing vegetation.
6/3	6/3+900	Approx. 125' vertical distance between ground (stream) and line. Identify & handcut all trees w/in 50' of line & fell away from stream/wetland. Spot spray hardwood stumps w/ Rodeo. Maintain all other low growing vegetation.
10/1	10/2	Approx. >125' vertical distance between ground (stream) and line. Identify & handcut all trees w/in 50' of line & fell away from stream/wetland. Spot spray hardwood stumps w/ Rodeo. Maintain all other low growing vegetation.
10/3	11/1	Approx. 125' vertical distance between ground (Sandy River) and line. Identify & handcut all trees w/in 50' of line & fell away from stream/wetland. Spot spray or inject herbicide to hardwood or cut stumps w/ Rodeo. Maintain all other low growing vegetation.
11/2	11/3	Approx. 125' vertical distance between ground (Bull Run River) and line. Identify & handcut all trees w/in 50' of line & fell away from stream/wetland. Spot spray hardwood stumps w/ Rodeo. Maintain all other low growing vegetation.
BE-O Ch/McL		
62/1	62/2	Approx. >125' vertical distance between ground (streams) and line. Identify & handcut all trees w/in 50' of line & fell away from stream/wetland. Spot spray hardwood stumps w/ Rodeo. Maintain all other low growing vegetation.
62/3	63/1	Approx. 125' vertical distance between ground (streams) and line. Identify & handcut all trees w/in 50' of line & fell away from stream/wetland. Spot spray hardwood stumps w/ Rodeo. Maintain all other low growing vegetation.

## 4. DETERMINE VEGETATION CONTROL METHODS

See Handbook — [Methods](#)

### 4.1 List Methods that will be used in areas not previously addressed in steps above.

See Handbook — [Manual](#), [Mechanical](#), [Biological](#), [Herbicides](#) for requirements for each of the methods.

See cut sheet and accompanying zones for veg. control methods & herbicides. Contractor will be required to use only those herbicides, mixtures, & adjuvants that are approved by BPA. List of BPA's approved herbicides, mixtures & adjuvants included in contract.

## 5. DETERMINE DEBRIS DISPOSAL AND REVEGETATION

### 5.1 Describe the debris disposal methods to be used and any special considerations.

See Handbook — [Debris disposal](#) for a checkbox list and requirements.

Lop & scatter when slash loading is light. Mow/mulch slash if heavy concentrations occur.

### 5.2 List areas of reseeding or replanting (those areas not already described in steps 1, 2, or 3).

See Handbook — [Reseeding/replanting](#) for requirements.

Reseeding will be determined during operations. Seeding will likely occur on access roads if at all.

### 5.3 If not using native seed/plants, describe why.

N/A

### 5.4 Describe timing and any follow-up that will need to take place to ensure germination/success of seeding/planting.

Seeding would occur in fall or spring if necessary.

## 6. DETERMINE MONITORING NEEDS

See handbook — [Monitoring](#) for requirements.

### 6.1 Describe the follow-up/monitoring cycle that will be used to evaluate the effectiveness of the vegetation control methods used.

Monitoring will occur during operations to determine how much & when contractor will need to do in the summer as followup work. Target vegetation control will be scrutinized for respraying in the spring/summer. Desired environmental results will be reviewed along streams, springs, wells, and soil. If any negative impact is apparent, measures will be taken immediately to mitigate. Once contract is completed, an analysis on the treatment will be done to make recommendations for the next treatment cycle.

### 6.2 Describe any follow-up or monitoring needed to determine if mitigation measures were effective.

Site will need to be reviewed annually by working patrol and NRS to insure treatment was effective.

## 7. PREPARE APPROPRIATE ENVIRONMENTAL DOCUMENTATION

See handbook — [Prepare Appropriate Environmental Documentation](#) for requirements. . Also prepare Supplement Analysis — [Supplement Analysis](#) — for signature.

### 7.1 Describe any potential project impacts or project work that are different than those disclosed in the Transmission System Vegetation Management Program EIS. Describe how those differences impact natural resources and if the differences are “substantial”.

N/A

### Is there a need for additional NEPA documentation (i.e. Forest Service requirement, Record of Decision, supplemental EIS)? If so, attach.

N/A

**Treatment Zones: Ostr-Troutdale/Hanf-Ostr/BE-Ostr/Chemawa/McLoughlin**

**Note: Only those herbicides, mixtures, & adjuvants approved by BPA may be applied. See BPA's list of approved herbicides , mixtures, & adjuvants.**

Zones	Treatment Alternatives
<b>SS</b>	<p>BPA fee-owned, State DNR, or private lands where a steep slope or visual resources precludes mechanical treatments. Available: all manual and biological treatments; all herbicide treatments except for cut-stubble treatment following a mechanical treatment.</p> <p><b>Herbicides:</b> glyphosate, triclopyr (Garlon 3A and 4), imazapyr, dicamba may be prescribed for cut-stump, stem-injection, and basal-stem treatments. In addition to the above herbicides, Escort, and clopyralid can be used spot foliar and broadcast treatments. 2,4-d amine can be added to the list to control noxious weed species.</p>
<b>LT</b>	<p>LEVEL TERRAIN: BPA, county, or private lands where the ROW is fairly flat and level. There are minimal environmental and treatment restrictions. Available: all manual, mechanical (when conditions make it feasible), and biological treatments: all herbicide treatments spot, localized, and broadcast treatment including cut-stubble treatment following a mechanical treatment where suitable.</p> <p><b>Herbicides:</b> glyphosate, triclopyr (Garlon 3A and 4), imazapyr, dicamba may be prescribed for cut-stump, stem-injection, and basal-stem treatments. In addition to the above herbicides, Escort, and clopyralid can be used spot foliar and Broadcast treatments. 2,4-d amine can be added to the list to control Noxious weed species.</p>
<b>STC/SKIP</b>	<p>Any areas in the corridor with greater than 38.1 m (125 ft.) vertical distance between the ground surface and transmission lines. Removal is periodically required only of individual trees (single tree cuts) that could encroach into the transmission corridor danger zone.</p> <p><b>Skip</b> areas are areas of Christmas tree plantations or vineyards. Skip areas need to be checked for tall growing trees to make sure line is safe for operation. Check with Inspector or COTR prior to application of any herbicides.</p> <p><b>Herbicides:</b> glyphosate, triclopyr (Garlon 3A and 4), imazapyr, dicamba may be prescribed for cut-stump, stem-injection, and basal-stem treatments. In addition to the above herbicides, Escort, and clopyralid can be used spot foliar and Broadcast treatments. 2,4-d amine can be added to the list to control Noxious weed species.</p>
<b>NON-HERB</b>	<p><b>NON-HERBICIDE AREAS</b></p> <p>Water sources and wells, parks, and other sensitive lands. Hand Cutting Methods only, no Herbicides allowed.</p> <p><b>WELLS:</b> No herbicides allowed within 50 feet of well head. Use only herbicides that do not have ground or surface water advisories between 500 and 165 feet of well head. Approved herbicides include: glyphosate, imazapyr, triclopyr, Escort.</p>

<p><b>Riparian</b></p>	<p>RIPARIAN: County or private lands, within 30.5 m (100 ft.) of a stream or open water. Available: all manual, spot and localized herbicide, and biological treatments, except grazing. No mechanical treatments.</p> <p><b>Herbicides:</b> Within 100 ft. of a stream, only cut-stump and localized treatments using practically toxic or Slightly toxic formulations of glyphosate, imazapyr, and Escort can be used up to the waters edge. Highly Toxic and very highly toxic (to fish) herbicides will not be used in this zone.</p>
<p><b>Riparian T&amp;E</b></p>	<p>RIPARIAN-T&amp;E: Lands within 122m (400 ft) of a listed T&amp;E stream. Available: all manual, spot, and localized herbicide and biological treatments, except grazing. No mechanical treatments.</p> <p><b>Herbicides:</b> No herbicides within 100 feet from waters edge. From 100-400 feet away from streams or water, Escort, Clopyralid, Imazapyr, the Rodeo® formulation of Glyphosate and Triclopyr (Garlon 3A) can be used. Highly toxic and very highly toxic (to fish) herbicides will not be used in this zone.</p>
<p><b>Wetlands</b></p>	<p>WETLANDS: BPA, county, or private lands where wetlands preclude the use of mechanical treatments and broadcast-foliar herbicide applications. Available: all manual, spot and localized herbicide treatments, and biological treatments, except grazing. No mechanical treatments.</p> <p><b>Herbicides:</b> Only glyphosate formulations approved for wetlands, Escort and triclopyr and other herbicides that are approved for wetlands may be prescribed for cut-stump, basal-stem, stem-injection, and spot-foliar treatments triclopyr (Garlon 4) may be used only more than 35 ft. from streams or water.</p>